

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for measuring the response of a voltage controlled oscillator within a phase locked loop comprising ~~the steps of~~:
 - a) setting a voltage output of an integrator near a threshold voltage of an output of a comparator;
 - b) holding a time period between a start of scan pulse and an end of scan pulse constant;
 - c) setting a digital to analog converter output voltage to its minimum value;
 - d) adjusting a counter M until said comparator output equals said threshold voltage,
 - e) setting the digital to analog converter output voltage to another output voltage;
 - f) repeating steps (d) through (e) for as many intervals to meet precision requirements, and
 - g) returning said counter M to its nominal value which returns said voltage output of said integrator near said threshold voltage of the output of said comparator.
2. (Currently Amended) The method according to claim 1, further comprising: repeating steps d through e ~~nine for an interval of nine times.~~ for nine intervals.
3. (Currently Amended) The method according to claim 1, further comprising ~~the step of~~: tabulating said M values against ~~said~~ digital to analog values.

4. (Currently Amended) The method according to claim 3, further comprising

~~the step of:~~

~~Calculating calculating~~ an exact frequency for any voltage output ~~of said~~ of a digital to analog output.

5. (Currently Amended) The method according to claim 2, further comprising

~~the step of:~~

providing a voltage output required ~~by said by a~~ digital to analog comparator when an instantaneous frequency is requested by the phase lock loop circuit by use of interpolation to create a requested frequency curve.

6. (Currently Amended) A phase locked loop circuit comprising:

an integrator having a voltage output set near a threshold voltage of an output ~~of a comparator;~~

a digital to analog converter output set to a minimum value;

a counter M continuously adjusted until said comparator output equals said threshold voltage, wherein said digital to analog converter output voltage is changed in stepwise fashion to another output voltage in association with said counter M for as many intervals needed to meet precision requirements

7. (Currently Amended) A phase lock loop circuit according to claim 6, further comprising:

said counter M returned to its nominal value which returns said voltage output of said integrator near said threshold voltage of the output of said comparator.

8. (Currently Amended) A phase lock loop circuit according to claim 6, further comprising:

said output of said digital to analog converter changed nine times.

9. (Currently Amended) A phase lock loop circuit according to claim 6, further comprising:

said M values tabulated against said digital to analog values.

10. (Original) The phase lock loop circuit according to claim 6, further comprising:

an exact frequency calculated for any voltage output of said digital to analog output.

11. (Currently Amended) The phase lock loop circuit according to claim 2, claim 6, further comprising:

a requested frequency curve created by interpolation when said voltage output is required ~~by said~~ by a digital to analog comparator when an instantaneous frequency is requested by the phase lock loop circuit.

12. (Currently Amended) A phase locked loop system ~~comprising the steps~~ ~~of comprising:~~

means for setting a voltage output of an integrator near a threshold voltage ~~of~~ ~~an output~~ of a comparator;

means for holding a time period between a start of scan pulse and an end of scan pulse constant;

means for setting a digital to analog converter output voltage to its minimum value;

means for adjusting a counter M until said comparator output equals said threshold voltage;

means for setting the digital to analog converter output voltage to another output voltage wherein said means for adjusting and setting are repeated for as many intervals as necessary to meet precision requirements;

means for returning said counter M to its nominal value which returns said voltage output of said integrator near said threshold voltage of said comparator; and
means for calculating an exact frequency for any voltage output of said digital to analog output.

13. (Currently Amended) The phase lock loop system according to claim 12, further comprising:

means for tabulating said M values against ~~said~~-digital to analog values.

14. (Currently Amended) The phase lock loop system according to claim 12, further comprising:

means for providing a voltage output required ~~by said~~-~~by a~~ digital to analog comparator when an instantaneous frequency is requested by the phase lock loop circuit by use of interpolation to create a requested frequency curve.